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## METHOD AND SYSTEM FOR ASSIGNING OBSERVATIONS

## ABSTRACT OF THE DISCLOSURE

According to one embodiment of the invention, computerized method for assigning observations includes receiving a plurality of first observations indicative of respective physical parameters observed by a first sensor system and receiving a plurality of second observations indicative of respective physical parameters observed by second sensor system. The method also assigning, by a computer, a set of pairs of the first and second observations predicted to correspond to the same physical parameter. The assigning includes receiving a cost function that specifies a cost for each assigned The cost is not independent of the assignment of any other assigned pairs in the set of assigned pairs. The assigning also includes determining the set assigned pairs corresponding to an optimal value for the by calculating, by the cost function computer, corresponding optimal value directed for a graph representative of possible assignments of first second observations.